

Medical Treatment Guidelines

Diagnoses and Treatment of Work-Related Carpal Tunnel Syndrome (OCTS)

These guidelines are to be used by physicians and Labor and Industries claim managers.

SECTION 1 -- CLAIM ACCEPTANCE

In general, both appropriate symptoms and signs and work relatedness should be present for Labor and Industries to accept a claim as OCTS. Nerve conduction velocity testing (NCVs) is not necessary for claim acceptance except in questionable circumstances.

A. Symptoms and Signs

Appropriate symptoms would include, numbness, tingling or burning pain of one or both hands, especially noted after work and at night. These nocturnal symptoms are prominent in 50-70% of patients. Patients frequently awaken at night or early morning and shake their hands to rid themselves of these symptoms. The location of these symptoms may be in the entire hand or localized to the thumb and first two or three fingers. If the nerve symptoms are prominent only in the fourth and fifth fingers (ring and little fingers), a different diagnosis (e.g., ulnar neuropathy) should be considered. Although burning pain is often prominent in the hands and palm side of the wrists, an aching pain may radiate (be felt in) to the medial elbow region or more proximally to the shoulder.

Findings on physical examination (signs) are frequently absent or non-specific. Tinel's sign (tapping on the wrist or over the median nerve) and Phelan's signs (forced flexion of the wrist) are frequently described, but by themselves are not specifically diagnostic of OCTS. Their presence merely corroborates the presence of other clear neurologic symptoms.

Other signs are more specific and include decreased sensation to pin or light touch in the palm and first three digits or weakness or atrophy of the muscles of the thenar eminence (especially the abductor pollicis brevis). The presence of the latter signs (but not Tinel's or Phelan's) may suggest more acute or advanced nerve injury and perhaps the need for more aggressive treatment.

In general, symptoms are better when not working and on holidays when the worker has been removed from the workplace exposure. Non-specific symptoms, (e.g., pain without numbness, tingling or burning; "dropping things") should not be considered for the diagnosis of OCTS.

Reference: Provider Bulletin 95-10; Date Introduced: November 1995

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B. Work-relatedness

Any activity requiring extensive or continuous use of the hands in work may be an appropriate exposure. In general, one of the following work conditions should be occurring on a regular basis:

- 1) Repetitive hand use, especially for prolonged periods (e.g., keyboard users), against force (e.g., meat cutters) or with awkward hand positions (e.g., grocery checkers), with repeated wrist flexion, extension or deviation as well as forearm rotation, or with constant firm gripping.
- 2) The presence of regular, strong vibrations (e.g., jackhammer, chainsaw).
- 3) Regular or intermittent pressure on the wrist. (Note: acute carpal tunnel syndrome may be associated with acute trauma, i.e., fracture, crush injury of wrist, etc.).

The types of jobs that are most frequently mentioned in the literature or reported in L&I's data include: meat cutting; seafood, fruit, or meat processing or canning; carpentry; roofing; dry walling; boat building; book binding; wood products work; dental hygienist; and intensive word processing. This is not an exhaustive list. It is only meant to be a guide in consideration of work-relatedness. If the history of exposure is unclear, then speaking directly with the employer or claimant, or doing a walk through, to obtain more detailed information on job duties would be critical.

NERVE CONDUCTION TESTING (NCVs)

It is critical to obtain NCV testing in the following situations:

1. The attending physician's diagnosis is OCTS, but the clinical criteria (appropriate neurologic symptoms and/or signs) described above are not met.
2. The patient has been on time-loss for OCTS for more than two weeks and the clinical criteria are met.
3. Carpal tunnel decompression surgery is requested.

Conceptually, validation of the clinical diagnosis of OCTS depends on the finding of sequential slowing of sensory and/or motor fibers of the median nerve across the carpal tunnel.

The most useful nerve conduction tests with their **(upper limit of) normal cut-points** are as follows:

Median motor distal latency

4.5 msec (slowing would be longer, i.e., greater than 4.5 msec)

Median sensory distal latency

wrist-digit II (14 cm)=3.5 msec
palm-wrist (8 cm)=2.2 msec

Median-ulnar sensory latency difference

finger-wrist difference (14 cm)=0.5 msec
palm-wrist difference (8 cm) =0.3 msec

These upper limit cut points are derived from published literature. If the electromyographer performs non-conventional tests for OCTS not listed here, normal values should have been established in that physician's laboratory.

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Labs can use their own cut points if they have adequately established their own normal values.

In all cases, and particularly in cases with borderline NCV results, control for skin temperature should be documented. In general, the above referenced values will hold for skin temperature in the range of 30-34 degrees Centigrade. Lower temperatures will be associated with falsely slowed NCV results.

An electromyogram (EMG), or needle examination of the muscles supplied by the median nerve, may be useful in documenting actual nerve damage (axonal loss). This test should be done especially in cases with sensory loss, weakness or muscle atrophy in the median nerve distribution.

TREATMENT

A. Conservative treatment

Conservative management may be helpful and may include:

- 1) Splinting of the wrist. (May be more useful at night).
- 2) Anti-inflammatory medication including non-steroidal.
- 3) Steroid injections - although this form of treatment is favored by some physicians, it may not have long term benefits and may itself cause nerve injury. No more than **two steroid injections over a three-month period** will be authorized.

The duration of conservative treatment will primarily depend on whether the patient can remain at work. Most patients will improve when off work, whether or not specific treatment is rendered. In some cases, job modification, along with conservative treatment, may improve symptoms and prevent worsening of OCTS. If job modification is not possible, or if the claimant cannot continue working with conservative treatment, then surgery should be considered as a treatment option.

B. Surgery

Decompression of the transverse carpal ligament is the surgical procedure of choice for OCTS. A second procedure, internal neurolysis, or freeing up of the nerve, is sometimes requested; however, there is no evidence to suggest that this procedure is necessary and, in most cases, requests for this procedure will be denied.

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In general, the following criteria should have been met for authorization of surgery to occur:

1. The clinical history should be consistent with OCTS.
2. NCVs should have demonstrated a conduction slowing of the median motor or sensory fibers across the carpal tunnel.
3. A course of conservative management must have been tried.

Most studies suggest that in 60-90% of the post-surgical cases the burning pain associated with OCTS will be alleviated. The patient's ability to return to the same job is not clear. If pain persists or recurs, NCVs can help sort out whether nerve entrapment continues to be a problem.

SPECIAL CASES

Questions may arise in several specific situations that may raise questions about the validity of the claim for OCTS or about the need for surgery.

- A. Work-relatedness may not be obvious. Some work exposures do not meet the guidelines for work-relatedness. If there is a question about the job exposure and whether such exposure could cause OCTS, the claim manager should refer the case to the occupational medical consultant by calling (360) 902-5026.
- B. Surgery may be requested in those injured workers whose clinical picture and work relatedness is quite clear, but whose NCVs are normal. Most clinicians agree that a minority (<10%) of patients with clinical OCTS may have normal NCVs. Options here may be the following:
 1. Were the most sensitive and specific NCV tests done (e.g., palm-wrist median sensory latency)? If not, request that they be done.
 2. If the NCVs were done after a period of not working, previously abnormal NCVs may have returned to normal. It would be reasonable in these cases to suggest that the claimant return to work for a brief time (a few days to a week) and repeat NCVs while they are still working.
- C. If OCTS is not documented by clinical criteria and NCV testing, other clinical problems related to repetitive use (i.e., tendonitis) should be investigated and treated appropriately. It would also be important to rule out other neurologic causes of tingling in the hands. Referral to an appropriate specialist (neurologist, physiatrist) would be prudent in such cases.
- D. Carpal tunnel syndrome may also be caused by anything that decreases the cross-sectional area of the carpal tunnel or adds to the volume of the carpal tunnel, resulting in increased pressure on the median nerve. This could occur by distortion of the bones or ligaments by fracture or crush injury of the forearm or hand associated with generalized or chronic swelling (edema).

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- E. Carpal tunnel syndrome may be associated with other chronic conditions that may cause nerve damage or predispose a nerve to injury from compression. The most common of these conditions is diabetes. The key test here is whether, in spite of the presence of such condition, the symptoms of OCTS can be documented to have begun only after beginning work at the job in question.
- F. A predisposing, physiological condition is pregnancy, wherein increased plasma volume increases pressure within the carpal tunnel. In such cases, symptoms universally disappear immediately after birth. If they do not, other etiologies (e.g., work-related, diabetes) should be pursued.

RETURN TO WORK AFTER OCTS SURGERY

The vast majority of persons with work-related OCTS are expected to have dramatic relief of their symptoms after carpal tunnel decompression surgery and should return to their same job. Return to work, with or without job modification, should be tried in most people. If symptoms worsen or reappear after return to work, repeat NCVs will help to sort out if OCTS has recurred, and if surgery successfully removed the pressure on the median nerve (NCVs will improve with successful surgery, although they may not return completely to normal).

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Criteria for the Diagnosis and Treatment of Work-Related Carpal Tunnel Syndrome				
PROCEDURE	CONSERVATIVE CARE	Clinical Findings		
		SUBJECTIVE	OBJECTIVE	DIAGNOSTIC
DECOMPRESSION OF THE MEDIAN NERVE	<ul style="list-style-type: none"> - Splinting - Anti-inflammatory medication - Steroid injections* <p>* No more than 2 injections in 3 months</p> <p>NOTE: In the absence of conservative care or with minimal conservative care, a request for surgery can still be considered pending clinical findings.</p>	<p>AND</p> <ul style="list-style-type: none"> - Complaints of numbness, tingling or "burning" pain of the hand or thumb and first 2 fingers. <p>Nocturnal symptoms may be prominent</p> <p>NOTE: Pain may radiate to inner elbow or to the shoulder</p>	<p>OR</p> <ul style="list-style-type: none"> - Decreased sensation to pin in palm and first 3 digits <p>OR</p> <ul style="list-style-type: none"> - Weakness or atrophy of the thenar eminence muscles. 	<p>AND</p> <ul style="list-style-type: none"> - Abnormal nerve conduction studies. Any one abnormality in one of the following*. - Median motor distal latency >4.5 msec - Median sensory distal latency wrist digit II (14 cm) >3.5 msec palm-wrist (8 cm) >2.2 msec - Median-ulnar sensory latency finger-wrist difference >0.5 msec palm-wrist difference >0.3 msec <p>OR</p> <ul style="list-style-type: none"> - Positive Needle EMG in cases of definite sensory deficit in median nerve distribution or weakness/atrophy of the thenar muscle <p>NOTE: If test result borderline, may want to repeat after (attempts to) RTW.</p> <p>*NCV must be done with control for skin temperature. Values are true for temperature in range of 30-34 C.</p>
	Nerve conduction studies should be done if worker is off work for > than two weeks or surgery requested.			

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SECTION 2 -- NEEDLE ELECTROMYOGRAPHY IN THE DIAGNOSIS OF CARPAL TUNNEL SYNDROME

Needle electromyography has only a limited role in the electrodiagnostic evaluation of carpal tunnel syndrome. It should generally not be done if nerve conduction studies are normal. There are three circumstances in which it would be reasonable to do needle electromyography during an evaluation for carpal tunnel syndrome:

- a. Nerve conduction studies are abnormal in a manner indicating carpal tunnel syndrome, and the patient demonstrates wasting or clinical weakness of the thenar muscles.
- b. The electromyographer suspects that a neuropathic process other than (or in addition to) carpal tunnel syndrome exists (e.g., diabetes).
- c. There is a history of an acute crush injury or other major trauma to the distal upper extremity.

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SECTION 3 -- WORKSHEET FOR CARPAL TUNNEL SYNDROME ELECTRODIAGNOSTIC STUDIES

DOCTORS PLEASE NOTE: This worksheet should accompany, BUT NOT REPLACE, the detailed report normally submitted to the department.

1. The purpose of this worksheet is to help medical consultants at L&I interpret electrodiagnostic testing that you do on L&I patients. It is for this reason that the worksheet follows on distal latency. The worksheet should be used only when the main purpose of your study is to evaluate a patient for OCTS.
2. You may have an automated system for reporting electrodiagnostic results. Feel free to send this in. But the department's worksheet should also be filled out and submitted.
3. On the worksheet, sensory distal latency should be measured to response peak and motor distal latency should be measured to response onset.
4. It is not necessary to do all the conduction studies listed on the worksheet. You should do only the studies needed to rule OCTS in or out.
5. It is sometimes necessary to do electrodiagnostic tests other than ones listed on the worksheet. If you do any additional studies bearing on the diagnosis of OCTS, please write them in the blank area below the listed studies.
6. If the inching technique of Kimura is used, only a maximum latency difference between 1 cm segments of 0.5 msec will be accepted as specific enough to corroborate the presence of OCTS.
7. The value of other studies of median nerve function has not been proven. These tests are NOT recommended for the diagnosis of OCTS. The following quotation is taken from a literature review published in Muscle & Nerve, 1993, Vol. 16, p. 1392-1414:

“Several other variations on median sensory and motor NCS's have been reported to be useful for the evaluation of patients with OCTS. The committee's review of the literature indicated that the value of these tests for the clinical electrodiagnostic evaluation of patients with OCTS remains to be established. These electrodiagnostic studies include the following: (1) studies of the median motor distal latency recorded from the lumbrical muscles,.. (2) measurement of the refractory period of the median nerve,.. (3) median motor residual latency measurements,.. (4) terminal latency ratio,.. (5) median F-wave abnormalities,.. (6) median motor nerve conduction amplitude comparisons with stimulation above and below the carpal ligament,.. (7) anterior interosseous/median nerve latency ratio,.. (8) change in median motor response configuration with median nerve stimulation at the wrist and elbow in the presence of Martin-Gruber anastomosis,.. (9) sensory amplitude measurements,.. and (10) measurement of median sensory and motor nerve conduction across the wrist before and after prolonged wrist flexion.”

The Washington State Medical Association (WSMA) Medical Treatment Guidelines Subcommittee and the Department of Labor and Industries Office of the Medical Director endorses the opinions in the above quote and believes that electromyographers should act in accordance with these opinions.

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Worksheet for Carpal Tunnel Nerve Conduction Studies

	Abnormal cut-point	Right Arm Distal Latency (msec)	Left Arm Distal Latency (msec)
1. Median motor to APB	>4.5 msec		
2. Median sensory over 14 cm (wrist to digit 2 or 3)	>3.5 msec		
3. Median sensory over 8 cm (transcarpal)	>2.2 msec		
4. Median sensory to Digit 4 MINUS Ulnar sensory to Digit 4	>.5 msec		
5. Median sensory (transcarpal) MINUS Ulnar sensory (transcarpal)	>.3 msec		
6. Ulnar sensory to Digit 5	>3.6 msec		

Claim Number: _____

Claimant Name: _____

Additional Comments:

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Signed _____

Date _____

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TO: **Psychiatrists and Psychologists**

FROM: Washington State Medical Association Medical Treatment Guidelines
Subcommittee of the WSMA Industrial Insurance & Rehabilitation
Committee

and

The Department of Labor and Industries Office of the Medical Director

DATE: November 1, 1995

SUBJECT: ***Guidelines for Psychiatric and Psychological Evaluation of
Injured or Chronically Disabled Workers*****

Enclosed you will find a set of suggestions for conducting psychiatric or psychological evaluations of injured workers with chronic pain problems. The suggestions focus on the clinical interview. They identify issues to explore and describe difficulties that frequently arise in evaluating injured workers.

The suggestions were developed for the specific problem of assessing low back pain patients being considered for spinal fusion. Psychological or psychiatric evaluation is required in this setting; that is, *the Department of Labor and Industries does not authorize a lumbar spinal fusion unless the patient has undergone a psychological or psychiatric evaluation.* The WSMA Medical Treatment Guidelines Subcommittee believes that although the suggestions were developed in a very specific context, they could help psychiatrists or psychologists perform elective evaluations of injured workers with a wide range of problems.

The suggestions are being sent to all psychiatrists and psychologists who are Labor and Industries' providers. We hope you will find them useful. Feel free to incorporate the suggestions you find useful into future psychological/psychiatric evaluations.

***** These guidelines were developed by Labor and Industries in collaboration
with the WSMA Medical Treatment Guidelines Subcommittee of the WSMA
Industrial Insurance and Rehabilitation Committee.***

Guidelines for Psychiatric and Psychological Evaluation Of Injured or Chronically Disabled Workers

GENERAL

A psychiatric interview can seem threatening to injured workers. They may fear they were sent for evaluation because their doctors or claim managers suspect their conditions are "made up" or "all in their head." Some perceive their industrial claim as a struggle and enter the examination expecting to be discounted. Despite these difficulties, a respectful, patient, and empathic interviewer can learn a great deal. Patients with chronic disability are often in crisis and may be eager to relate their histories if we respond favorably to initial fear and defensiveness.

The purpose of the evaluation may vary, but commonly there are two issues you will be asked to address:

- Is a psychiatric condition present? Responding to this question involves a diagnosis centered assessment compatible with DSM-IV.
- Are there emotional factors that perpetuate physical complaints? These factors may be disorders on Axis I or Axis II, or may be subtle features that by themselves would not result in a psychiatric diagnosis. Subtle factors include unspoken fears, hidden motives, or family dysfunction. This is the more difficult part of the examination, for which experience with chronic disability is helpful. Psychiatric features that commonly contribute to chronic disability include agoraphobia, antisocial and dependent personality traits, perception of harassment at work, and threatened abandonment. Often the dynamic involves a central emotional vulnerability concealed by a screen of disability and physical complaints. To arrive at an understanding of the underlying issue, we will need heightened sensitivity to common patterns in chronic disability. This report provides some suggestions for those who wish to understand these issues.

The Clinical Interview Using DSM-IV published by the American Psychiatric Association describes two interview styles: symptom-oriented or descriptive and insight-oriented or psychodynamic. A symptom-oriented style searches for characteristic signs and symptoms of disorders in DSM-IV and is useful approaching the first question. The second is non-directive and allows examination of unconscious communication. Aspects of both styles are useful in the interview of injured workers.

Reference: Date Introduced: November 1995

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As with the insight-oriented style, the interviewer should avoid leading questions. If the person is suggestible or dramatizes illness, questions that infer diagnostic criteria yield positive responses in many categories. For example, with depression, it is better to ask if there has been a change in energy, rather than if energy is low.

Consistent with the symptom-oriented style, it is helpful to provide structure at appropriate times during the interview. Allowing the patient to relate history without direction, though sometimes desirable in psychotherapy, can result in a shallow, uninformed report. It is important to explore symptoms thoroughly in a non-leading way, rather than accept complaints at face value. To become aware of hidden fears or motives, the interviewer must sometimes actively pursue clues from the interview or the file.

Medical Records

Another area of importance is review of medical records. Records from before the injury can be particularly important. As you review medical records be alert for several features. First, be aware of "functional findings" or signs that are inconsistent with organic illness, as described below. Second, assess attitude toward treatment and the medical and vocational system. If there is a recurrent pattern of passive resistance to all forms of treatment, there is reason to suspect psychological factors contribute to the disability. Third, look for evidence of substance abuse.

Functional findings include:

- Waddell's criteria for assessment of low back pain:
 - a) Diffuse tenderness, especially to light touch.
 - b) Inconsistent direct versus indirect observation, such as discrepancy of straight leg raising, sitting and supine.
 - c) Pain on truncal rotation.
 - d) Pain on axial compression.
 - e) An abnormal degree of verbal or nonverbal pain behavior such as wincing, groaning, dramatic limp, or dramatic tearfulness during physical examination.
- Non-anatomic sensory disturbance, such as glove or stocking hypalgesia.
- Give-way weakness.

If there are inconsistencies comparing history with information from the medical file, it may be informative to ask about the inconsistencies.

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GUIDELINES

Confidentiality

Generally, the interview is not a dyad. There are other interested parties, and it is necessary to explain that information is not confidential. Because of this public framework, it can facilitate communication if you dictate the report during the interview.

The person is then aware what other parties will hear and may feel reassured if the report is accurate and empathic. Also, allowing correction of potential errors may further a sense of control and enhance disclosure.

Introduction

Introduce yourself and explain the circumstances of the interview. Explain who will have access to the report. Personal information will be asked about, but the person can freely choose not to respond if uncomfortable with doing so. If true, it may be helpful to explain that psychiatric assessment is commonly requested when a physical injury has become chronic or when complex surgery is being considered, and the request for evaluation does not necessarily infer anything more than that.

The report should identify age, race, date and nature of injury, and any specific concerns about the evaluation.

Chief Complaint

Obtain a list of symptoms and complaints, including physical problems.

Circumstances Prior to the Injury

A traditional format might collect information regarding present illness at this point. Many use this format with good results. However, clarifying life events that precede the injury affords a broader perspective when the interview progresses to present illness. In either case, the following points should be covered at some point in the interview.

- Employment:

Security of employment: If recently employed, or if the nature of work is intermittent, ask the percentage of time employed over last few years, and the reason for periods of unemployment. Ask the reason for leaving earlier employment. Assess changes in the economy for the industry, for example, whether the company is still in business or whether layoffs were planned.

Employment problems: This area is often fruitful, and should be carefully examined. Determine what the supervisors were like to work for, and if there was harassment or conflict with coworkers or supervisors. Determine how the person's work performance was viewed by superiors, and if reprimands or complaints were filed by

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the person or the employer. Carefully assess for perceptions of harassment or discrimination.

Employment plans: Ask about career plans before the injury.

- Family relationships:

Spouse: Ask age, health, and employment status of spouse, as well as length of relationship. Is the spouse disabled? How do they get along? Were they ever separated? If this (or any important relationship) was threatened, try to determine if disability might be a conscious or unconscious tool for stabilizing the relationship.

Children: Ask ages, health status, who is at home, and if there have been any significant problems.

Other Family: Ask about any other family with frequent contact. It is useful to know if there has been recurrent conflict or any major losses in the family.

- Activities: Ask how leisure time is spent, hobbies, avocational interests. Ask how the injury has affected pleasurable activities.
- Interpersonal Relationships: Assess patterns of isolation Vs socialization. Ask about friends, comfort in group situations, as well as comfort being alone. Is there capacity for intimacy and for communication of personal concerns?

History of the Injury

A thorough history of how the injury occurred can be informative, especially if it may have been emotionally traumatic or head injury is suspected. If the injury was traumatic, determine if PTSD symptoms are present. A non-leading way might be to ask if much time is spent thinking about the accident and how it feels to think about it. It is also important to know if there is anger, blame, or guilt regarding circumstances of the injury.

Elicit a history of important events subsequent to the accident, including medical treatment and effects on family, work and finances. Bankruptcy, eviction, foreclosure, or repossession can contribute to chronic disability.

Medical History

The report should include a brief history of treatment and response, with a focus on:

- Medical system: The relationship with doctors, vocational counselors, and others is an important clue to personality function and motivation. If there is a pervasive pattern of being misunderstood and persecuted you might suspect character pathology is a block to recovery. Unrealistic blame, martyrdom and entitlement suggest a hidden desire to remain disabled.

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- **Results of Treatment:** Determine the longitudinal course of the illness. Individuals with chronic disability usually report that no treatment has provided lasting benefit, and the illness has steadily worsened despite all treatment efforts. What you may discover in talking with individuals with chronic disability is a curious contradiction between verbal and other channels of communication. On the surface, there is a positive image of a strong desire to recover and return to work, but upon wading into this stream one becomes aware of a strong undercurrent in a different direction. This is difficult to describe, but often it appears as a discomfort with certain topics and a pattern of communicating through inference. For example, the desire for recovery is vague, lacking a specific plan beyond continuation of passive treatments. Persistence in asking about plans may lead to irritability. They often mention the opinions of others, usually health care professionals, who think they are disabled. If you ask for specific information hoping to better understand a particular symptom, you might receive instead an illustration of how severely life has been affected by the symptom. They imply inability to function unless the illness resolves. They may seem preoccupied with additional treatment, particularly surgery or other passive approaches, and demonstrate resistance to physical conditioning and work hardening. They may be critical of prior physicians who expected too high a level of functioning and seem more comfortable with doctors willing to validate disability indefinitely.

A way to open this area of inquiry might be to ask what the person believes is the cause of the problem, and if they feel doctors have addressed the problem. Ask what they would like to see happen.

- **Locus of Control:** Is the person's role passive, waiting for others to restore function, or is the injury a personal setback that must be adjusted to.

Work Since the Injury

Obtain a chronological history of work since the injury, including the reason for any disruptions. How was the person welcomed upon return? Blame for the injury, demotion, or suspicions of malingering are very stressful and can contribute to chronic disability. Conversely, acceptance and patience aid recovery. Ask about employment plans. If the person does not feel able to work, determine which symptoms present a barrier. Ask if the employer is receptive, or if the person has looked for work, and if so, the result. What level of income/status is acceptable? What does the person envision two years from now?

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Psychiatric History

In addition to a general assessment of psychiatric symptoms, determine how life has been affected by the injury and how the person has adjusted to the changes. Generally, it is best to allow an unstructured recitation of events since the injury.

Common psychiatric findings are depression and panic disorder.

For depression, ask how the person's mood or spirits have been. If there is depression, what seemed to be the precipitant? Obtain a description of what it was like at the lowest point. If there is evidence for mood disorder, develop a history of any diagnostic criteria. It is important to distinguish effects of pain. For example, if there is middle insomnia, were the awakenings spontaneous (consistent with major depression) or due to pain. What did the person do upon awakening? Getting up to walk and relieve stiffness or pain suggests awakening due to pain.

Similar differential inquiries are necessary for disturbances of appetite, energy, libido, and ability to experience pleasure.

Panic disorder is common enough in the general population, but it is very common in the population described by chronic disability. When panic attacks occur in individuals who have trouble expressing emotion or who feel shame regarding emotional symptoms, the presentation is likely to be one of pain rather than anxiety. Discovering the condition, however, can be difficult.

The most sensitive screening seems to be a careful assessment of current activities, which is also useful. Avoidance of the typical problem areas for agoraphobics such as grocery stores, shopping malls, crowds and driving raises the suspicion of agoraphobia. From there you might ask how the person feels in these situations, and what happens that creates discomfort. Additionally, you may ask if there have been any spells involving dizziness or heart or breathing symptoms. If screening questions are positive, develop a full DSM-IV history, especially for agoraphobia. If panic attacks were present, what did the person do or feel like doing when they occurred at work.

Narcotic and alcohol dependence are often found in chronic disability. It is often difficult to assess this issue without information from the medical file.

Current Activities

Ask how time is spent. Boredom, purposelessness, or severe physical limitations may lead to depression.

Secondary gain from the family should be assessed. It is useful to know how the family has responded, for example if they have been supportive or impatient. What are the responsibilities at home? Have family members become employed as a result of the injury, or alternatively, have family members sacrificed employment or other activities to care for the person?

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Past Psychiatric History

Ask about prior illness, carefully assessing for substance abuse; use of psychiatric medication; evidence of sociopathy such as arrests; and history of prior trauma such as combat that might lead to PTSD. Assess carefully for substance abuse, relying on potential clues from medical records as well as the clinical history.

Past Medical History

Determine response to any prior illnesses or injuries. Important clues may come from medical records. Determine whether there were long periods of disability. Ask about the emotional response to prior injuries.

Family History

In addition to asking about familial illnesses such as mood disorders, substance abuse, and anxiety disorders, determine whether family members have been disabled.

Personal History

The record should include a customary history of the person's life, with emphasis on factors that have bearing on chronic disability. Such factors include:

- **Family structure:** A childhood history of conflict, abuse, or deprivation correlates with chronic disability. Determine the number and health of siblings and whether the parents stayed together. Obtain a history of adults in the home. Ask if they have worked steadily. Ask about their health, listening carefully for history of chronic illness, agoraphobia, depression, hypochondriasis, somatization, illness of the same kind the patient experiences, or periods of disability.

Ask about the relationship with adults, following affect carefully for cues. Helpful questions might include, "What was he [or she] like when you were a child?" "How did he relate with you?" "Did you feel loved?" It is important to determine if sexual, physical or verbal abuse, or episodes of abandonment were present. Determine if alcohol or drug abuse was present in parents. Are childhood memories contiguous? Was there acting out, which might suggest deprivation or abuse?

If there are risk factors for abuse, ask about symptoms of PTSD such as dissociation, nightmares, and flashbacks. History of abandonment, neglect, and parental indifference are important.

- **Education:** Ask for education level, grade point, any special education, honors, repeating or skipping classes. Learning disabilities, attention deficit disorder, or educational failures can contribute to shame and a perception of low worth in the job market, which can fuel chronic disability. If there seems to be a disparity between educational and occupational success, try to discover the reason.

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- **Marital history:** Look for clues suggesting difficulty sustaining relationships or antisocial traits.
- **Employment history:** A history of menial, unrewarding, or excessively demanding work correlates with chronic disability. Vocational difficulty may be indicated by frequent job change, being fired, and aimlessness.

Mental Status Examination

As in a standard mental status examination, report general appearance, attitude, motor behavior, speech pattern, affective state, thought processes, perception, intellectual function, orientation, memory and judgment. In addition, describe pain behavior and genuineness.

Describe any personality traits which may influence chronic disability, such as:

- Lack of empathy or self-absorption, as in attitudes of entitlement or antisocial indifference.
- Alexithymia and globally deficient insight with rigid, irritable avoidance of emotion.
- Evasiveness and discomfort with specific questions. Emphasis on an "industrial" explanation for symptoms with minimization of other stressors.
- Repeatedly seeing oneself as a victim.
- Chronic anger, projection of blame, or passive-aggressive patterns of response.
- Dependent traits, such as submissiveness, undue anticipation of others' needs, impaired assertiveness, and excessive longing to feel loved.
- Histrionic traits, psychological naiveté, and Pollyanna attitudes.

DSM-IV Diagnoses

Specify Axis I, II, IV and V, with findings that lead to each diagnosis.

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Conclusions

In addition to responding to referral questions, it is useful to include:

- Risk factors for chronic disability and barriers to recovery. Identify which barriers may be treatable and which will probably not be responsive.
- An assessment of psychological factors in this person's presentation of illness. Explain as clearly as possible how, if at all, the emotional condition may contribute to disability.
- Treatment recommendations. Treatment for psychiatric illness due to the injury might be indicated. If treatment is recommended, you may wish to make specific recommendations for the attending orthopedist or neurologist to consider. If treatment is recommended, try to estimate prognosis and a time-frame.
- Alternatively, the history might reveal psychological features that are primarily responsible for the disability. In that case, it may be necessary to assist in setting limits on medical services and disability status.
- Ability to Work. Some patients will have a psychiatric disorder that limits or prevents employment. Others will have a psychiatric condition that interferes with comfort or willingness, but ability to work is not affected. It is important to differentiate impaired motivation from impaired ability to work, and to communicate the difference in the report.